

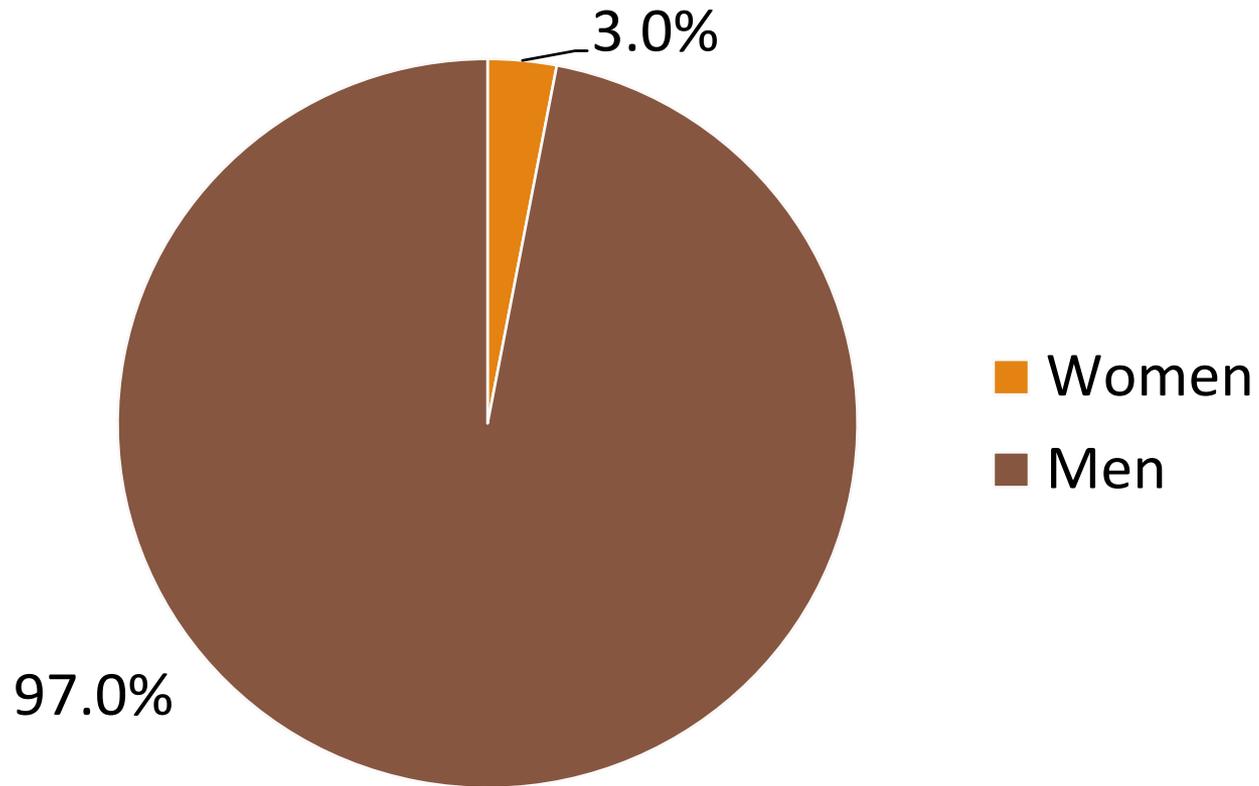
Exploring mental health effects of exposure to gender-related stressors for women in construction

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Construction's gender imbalance



*Source: Bureau of Labor Statistics, Occupational employment statistics, occupational employment and wages, May 2016

Effects of the male-dominated culture

#MeToo



* Folio Magazine

#MeToo

#MeToo

#MeToo

#MeToo

“I have been doing this a long time. It has gotten better but so much of the stress is covert, hard to pin down. The harassment never really stops; you learn to ignore it... Men don't want us there so it is a constant, unstated hostile environment.”

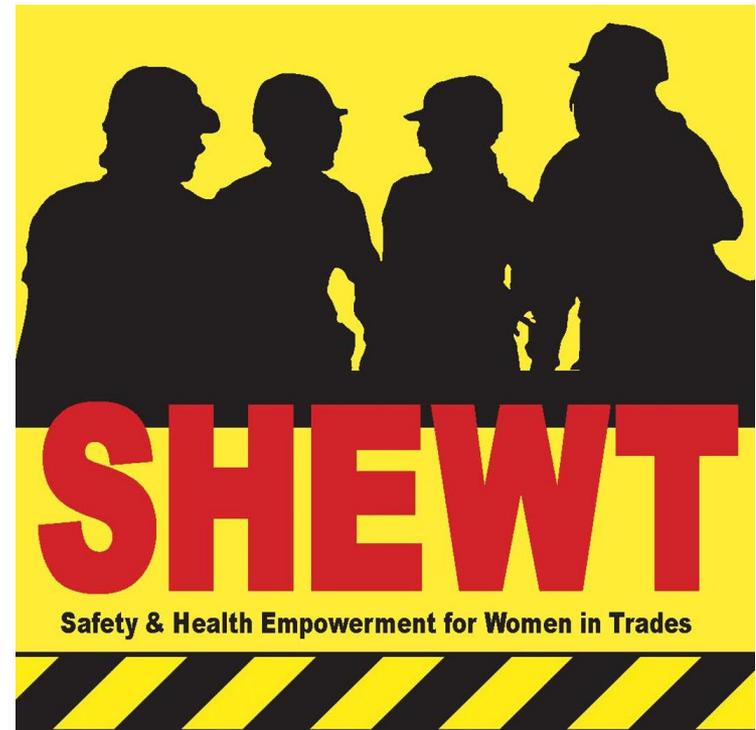
Journeywoman electrician

Safety and Health Empowerment for Women in Trades

Study goal: to identify and address the impact of health and safety risks affecting women workers

Study methods

- Phase I: research
- Phase II: program development



Focus group themes

- Physical risks
 - Dangerous work environment
 - Complacency
 - Production over safety
- Non-physical risks
 - Job insecurity
 - No paid sick leave
 - Inadequate bathrooms
 - Macho culture

- **Women-specific risks**
 - Inadequate PPE
 - Physical limitations
 - Sexual harassment
 - Gender discrimination
 - Tokenism
 - Overcompensation
 - Poor work-life balance
 - Fear of reporting

“It’s like being under a magnifying glass every day you go to work.”

Journeywoman carpenter

Survey

Survey measured:

- Injury, perceived stress, general health, occupational exposures, Personal Protective Equipment use and fit, job demands/control, discrimination, harassment, isolation, overcompensation, work/life balance, tokenism, social support, safety climate

291 workers completed survey in 2015-2016

Survey

Demographics

	Women (n=198) %	Men (n=93) %
Trade*		
Carpenter	10	8
Electrician	23	17
Laborer	31	43
Pipe trades	11	19
Sheet metal worker	7	6
Other	18	6
Career Level*		
Apprentice	37	57
Journey	63	43
Years in Trades		
1-3	34	43
4-10	32	32
11+	35	25
Current Union Member		
Yes	89	94
Age Range (yrs)		
<30	14	23
30-40	35	38
41-50	26	16
>50	25	23

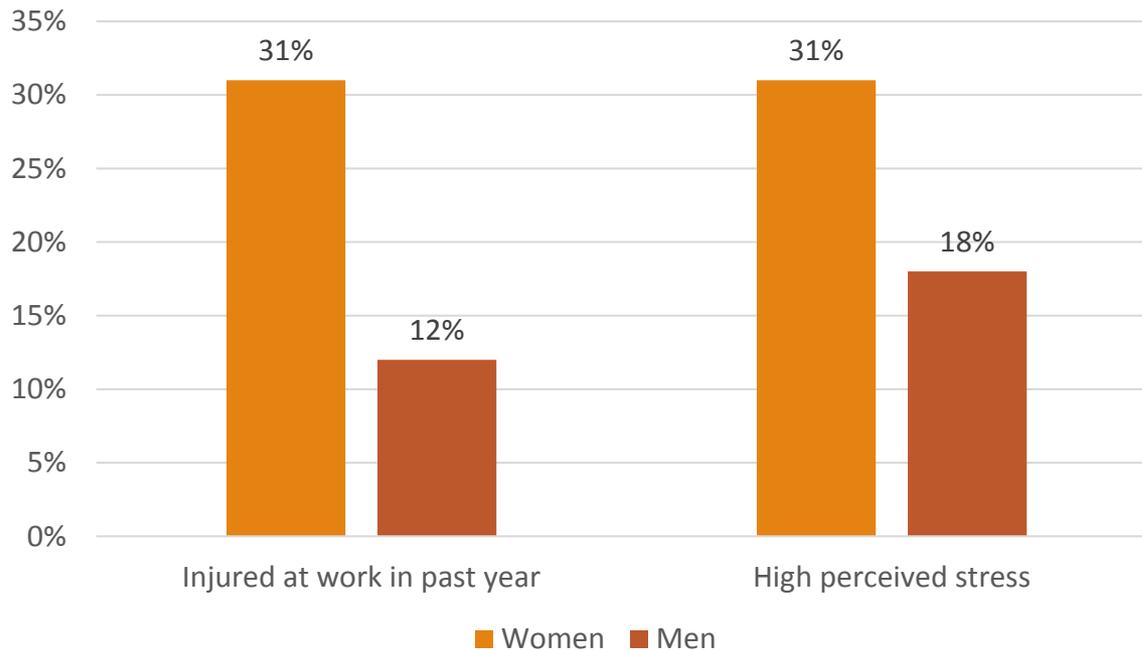
*p<0.05 **p<0.01 ***p<0.001
Independent sample chi-square.

Survey

Descriptive results:

Outcomes

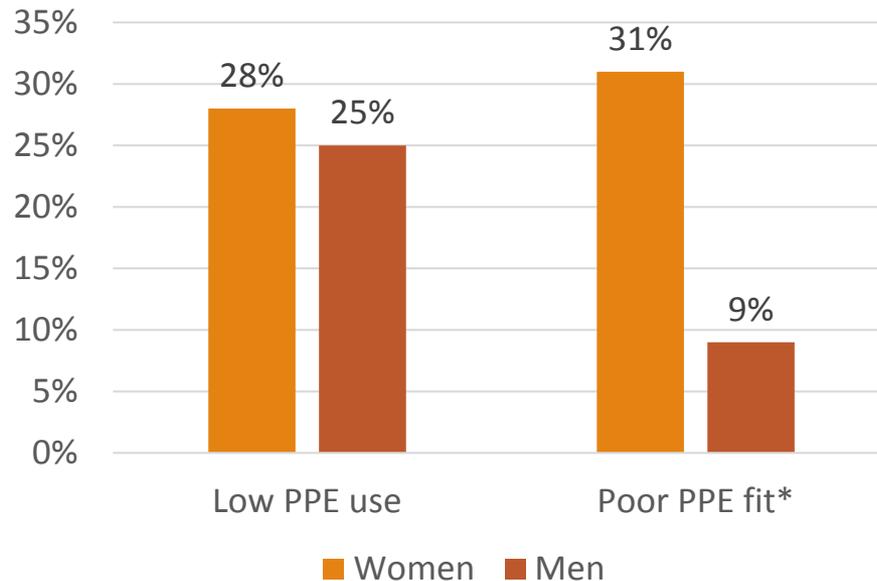
- Compared to men, women reported a higher risk of injury at work in the past year and high levels of stress



Survey

Descriptive results:

Personal Protective Equipment (PPE) fit



Of women who did not feel comfortable asking for better PPE, more than half listed **“fear of being labeled complainer by coworkers”** or **“fear of layoff”** as the primary reason

*Women and men are significantly different at $p < 0.05$
Women (n=198), men (n=93)

Survey

Descriptive results:

Psychosocial
exposures

	Women (n=198) %	Men (n=93) %
Gender Discrimination***		
Yes	43	4
Age Discrimination		
Yes	19	12
Bullying***		
Yes	39	16
Sexual Harassment		
High (<25 th percentile)	30	N/A
Overcompensation		
High (<25 th percentile)	36	29
Work/Life Balance		
Poor (<25 th percentile)	43	33
Isolation		
High (<25 th percentile)	35	31
Safety Climate		
Low (<25 th percentile)	27	17
Social Support		
Low (<25 th percentile)	29	17

*p<0.05 **p<0.01 ***p<0.001
N/A questions not asked of men
Independent sample chi-square.

Survey

Logistic regression analyses for women

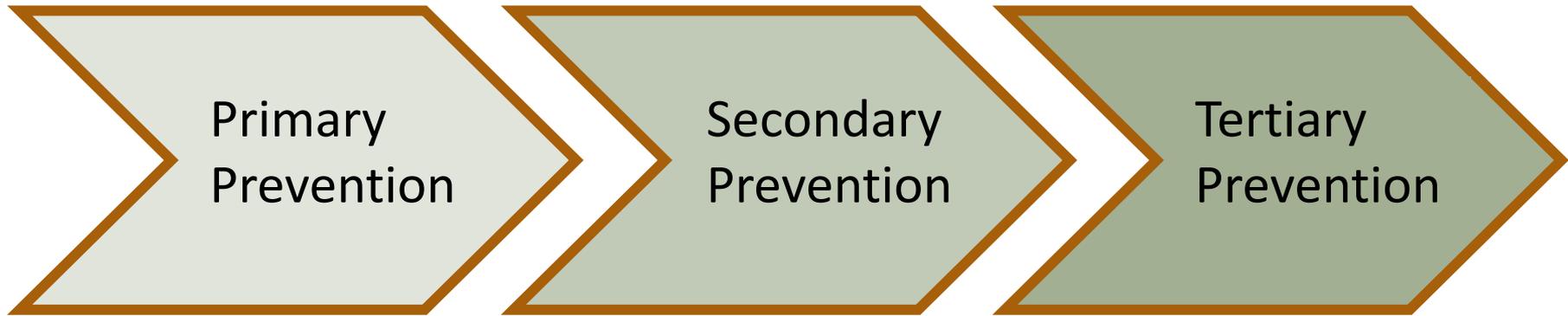
Variable (reference category)	Stress (>2.2) OR
Gender Discrimination (no)	
Yes	2.46*†
Age Discrimination (no)	
Yes	9.77***
Bullying (no)	
Yes	2.43**†
Overcompensation (low)	
High (<25th percentile)	1.94
Work/Life Balance (good)	
Poor (<25th percentile)	7.78***
Isolation (low)	
High (<25th percentile)	2.08*†
Sexual Harassment (low)	
High (<25th percentile)	2.40*†
Safety Climate (high)	
Low (<25th percentile)	2.50*†
Social Support (high)	
Low (<25th percentile)	4.00**

*p<0.05 **p<0.01 ***p<0.001

†Overall model p>0.05

All models control for trade, career level, and age.

Mentoring



Primary
Prevention

Secondary
Prevention

Tertiary
Prevention

Leadership skills for women to succeed in apprenticeships

Mentor training to change cultural norms

Women's retention to shift gender imbalance

Identifying harassing and unsafe behaviors

Problem-solving skills to help address issues before they develop

Provide support for women who experience harassment and other health/safety hazards

Resources to treat stress and other mental health conditions

SHEWT Pilot Mentoring Program

Aims:

- To empower women apprentices to recognize their stressors and advocate for safe worksites
- To increase awareness of how the male-dominated trades culture affects women's safety
- To evaluate the effectiveness of a structured mentoring program focused on women's health and safety in the trades

SHEWT Pilot Mentoring Program

Preliminary findings:

Specific mentee concerns

- Low confidence in skills
- Fear of speaking up about safety concerns
- Unsure about what constitutes harassment
- Lack of childcare

Lessons learned

- Building trust takes time
- Mentees need training
- Mentoring as “getting ahead” not “needing help”

Acknowledgements

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- Washington State Building & Construction Trades Council's Pre-Apprenticeship Construction Education (PACE) program
- Leaders from local unions and apprenticeship programs

Thank you to the women and men who participated in our study!



Sources cited

Bureau of Labor Statistics. (2016). Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity. Available at: <http://www.bls.gov/cps/cpsaat11.htm>.

Goldenhar, L.M., & Sweeney, M.H. (1996). Tradeswomen's perspectives on occupational health and safety: A qualitative investigation. *American journal of industrial medicine*, 29(5), 516-520.

Goldenhar, L.M., Swanson, N.G., Hurrell Jr, J.J., Ruder, A., & Deddens, J. (1998). Stressors and adverse outcomes for female construction workers. *Journal of occupational health psychology*, 3(1), 19.

Hegewisch, A., & O'Farrell, B. (2015). *Women in the Construction Trades*.

Helmer, M., & Altstadt, D. (2013). *Apprenticeship: Completion and Cancellation in the Building Trades*. Washington, DC: The Aspen Institute.

Kivimäki, M., Virtanen, M., Vartia, M., Elovainio, M., Vahtera, J., & Keltikangas-Järvinen, L. (2003). Workplace bullying and the risk of cardiovascular disease and depression. *Occupational and environmental medicine*, 60(10), 779-783.

LeBreton, L.W., & Loevy, S.S. (1992). *Breaking New Ground: Worksite 2000: a Report*. Chicago Women in Trades.

Menches, C.L., & Abraham, D.M. (2007). Women in construction—tapping the untapped resource to meet future demands. *Journal of construction engineering and management*, 133(9), 701-707.

Moir, S., Thomson, M., & Kelleher, C. (2011). *Unfinished business: Building equality for women in the construction trades*.

Onyebeke, L.C., Papazaharias, D.M., Freund, A., Dropkin, J., McCann, M., Sanchez, S.H., ... & Zuckerman, N.C. (2016). Access to properly fitting personal protective equipment for female construction workers. *American Journal of Industrial Medicine*.

Rospenda, K. M., Richman, J. A., Ehmke, J. L., & Zlatoper, K. W. (2005). Is workplace harassment hazardous to your health?. *Journal of Business and Psychology*, 20(1), 95-110. 19.

Vartia, M. A. (2001). Consequences of workplace bullying with respect to the well-being of its targets and the observers of bullying. *Scandinavian journal of work, environment & health*, 63-69.